

Mapping and Assessment Subcommittee
Recommendations to the
Governor's Forest Health Advisory and Oversight Councils
March 10, 2005

The need for ongoing state-level Geographic Information Systems (GIS) resources to support the State Forester, Healthy Forest Restoration and Public Safety.

The Mapping and Assessment (M&A) Subcommittee of the Arizona Governor's Forest Health Councils asks for the Councils' support in the dedication of ongoing state Geographic Information Systems (GIS) resources for the collection, analysis, and distribution of geographic data, maps and information specifically related to forestry, forest health, fuels treatment, wildland fire management and public safety activities throughout Arizona.

The M & A Subcommittee

The Mapping and Assessment Subcommittee was created to provide recommendations and guidance to the Governor's Forest Health Councils. The Subcommittee strives to improve the efficiency and effectiveness of mapping and assessment activities relative to Arizona's forest health, and management of forest fuels that can contribute to catastrophic wildfire events.

The Growing Need for GIS Resources

As Arizona's forestry and wildfire issues become increasingly prioritized, the need for continued mapping, assessment, and administrative support at the state level is becoming more pronounced.

The State Forestry Division of the Arizona State Land Department currently has no resources dedicated to GIS analysis and map production. There is very limited capability to provide support for efforts relative to forest health, and protection of the public from negative effects of wildfire. Currently, State Forestry Division GIS contributions are supported by time-limited grant funding or are donated by other agencies. The following GIS needs have been identified to address forest health issues, but there is no long-term funding to support these activities.

- The HEALTHY FOREST RESTORATION ACT OF 2003 calls for the development of Community Wildfire Protection Plans (CWPP) in coordination with the State Forester. CWPPs are based on specific geographic areas that are assessed using a variety of mapping data. Spatial analysis is fundamental for conducting the assessments and creating the maps included in the plans. The spatial data and associated attributes from individual plans can be brought together into a statewide database to support management and strategic planning.
- The ARIZONA FIRE MAP project, recommended and supported by the M&A subcommittee, involves collection, coordination, and Internet distribution of statewide fuel treatment information. The first phase of this project is funded through a grant from the Arizona Department of Emergency and Military Affairs (DEMA). It is being developed by the State Forester's Office and the State Cartographer's Office using short-term employees and contractors, and is scheduled to go on-line by June 2005. There is presently no funding identified for maintenance, quality control or long-term development of this application.
- The FOREST STEWARDSHIP - SPATIAL ANALYSIS PROJECT (SAP) is a program initially funded through a grant from the USDA Forest Service to inventory and map Arizona's forest stewardship projects on private lands and to develop statewide suitability models for future projects. State Forestry staff and temporary GIS staff within the State Cartographer's Office will complete initial work under the grant, but there are no resources identified for ongoing data collection, maintenance, or analysis.

- The FOREST HEALTH BILL passed by the Arizona Legislature and signed by the Governor in 2004 requires the State Forester to accept additional responsibilities for the management and tracking of specific forestry activities in Arizona.
- REGIONAL ORGANIZATIONS, LOCAL GOVERNMENTS, AND COMMUNITY GROUPS increasingly request statewide framework and standardized project data for addressing public safety issues, fulfilling state and federal reporting requirements, monitoring forest health activities and projects, prioritization and planning wildfire and other emergency responses, and keeping the public informed.
- The ongoing needs of the GOVERNOR'S OFFICE and the STATE FORESTRY OFFICE increasingly require the development of maps, map data, and GIS analysis. GIS products are used on a regular basis to provide information for briefings, timely decision-making related to Arizona forestry issues, and allocation of resources. Common subjects include:
 - Maps related to the location and status of current fires,
 - Status and effectiveness of fuel treatment activities,
 - Development of Community Wildfire and Firewise Protection plans,
 - And identification of high-risk communities.
- MANAGEMENT OF ARIZONA FORESTRY AND FOREST HEALTH DATA that is consistent and effective requires specific resources be identified to provide data development, quality control, and ongoing maintenance functions. For geographic and other data to be useful, it must be collected, maintained, and made accessible. Cross-agency collaboration and data integration is particularly important for addressing forest health issues.

Presently, statewide datasets are created, validated, and maintained by particular agencies (or groups of agencies) that take on a role of data stewardship. They collect and maintain the data, correct errors and perform quality control functions, document the data's accuracy, make the data available to other organizations, and answer data-related questions. In the case of geographic information pertaining to Arizona's forest health, there is no identified statewide data steward and there are no resources identified for any organization to take on these stewardship roles. Without identified resources, these GIS functions will not occur.

The following table offers illustration of a few existing statewide datasets and identified data stewards.

Statewide Data Type	Identified Data Stewards
Land Surface Management	BLM & AZ State Land Dept
Highways and Major Roads	AZ Dept of Transportation
Critical Infrastructure	AZ Dept of Public Safety & AZ Dept of Health
Tax Districts	AZ Dept of Revenue
Geodetic Control	National Geodetic Survey
Geographic Names	US Geological Survey (Geographic Names Information System)
Geology	Arizona Geological Survey
Land Ownership	AZ Dept of Revenue
<i>Forestry and Forest Health Data</i>	<i>None Identified</i>

Required Resources

The Mapping and Assessment Subcommittee recommends the Governor's Forest Health Councils support a GIS group dedicated to:

- Collection, analysis, and distribution of geographic data;
- Production of maps and information specifically related to forestry, forest health, and fuels treatment; and,
- Support for wildland fire management and emergency response activities throughout Arizona.

Present and future funding levels should be planned to provide:

- Adequate staff,
- Purchase of capital and non-capital equipment,
- And sub-contractual support as needed.

Funding will support efforts to maintain and update datasets and information for ongoing and future forest health and public safety projects. These efforts include:

- Collection and integration of fire and forest health related GIS data and information from diverse sources throughout the state.
- Collection of standardized fuels treatment, fire assistance grant, and forest health digital data for inclusion into a GIS database.
- Creation and maintenance of a central database clearinghouse for Arizona geo-spatial data and information related to forestry, forest health, fuels treatment and wildland fire activities.
- Providing access to GIS data by natural resource managers and incident management teams. This would allow more efficient and effective response, promote enhanced operational control, and improved protection for Arizona's citizens and property.
- Production of maps and map products to support wildland fire management, grant monitoring, Community Wildfire Protection Plans, regional and local forestry and forest health issues and other activities crucial to the activities of the State Forester's Office.
- Development of custom applications to collect, analyze and distribute Arizona GIS forestry data and information. This should include the development of GIS applications, web sites, portals or other interactive mapping services.
- Assistance to regional and local authorities in the access and use of required geospatial forestry data and related information and to be a resource for state, county, regional and local level planners, fire fighters, emergency responders, and community groups.
- Help promote and support use of geo-spatial forest data for more effective planning, management and response.